IN THE CLAIMS

The following listing of claims shall replace all prior versions of the claims. Please add Claims 64-68.

Claims 1-26 (canceled)

27. (Currently Amended) A composition comprising:

~~A~~an isolated nucleic acid molecule encoding a protein having an amino acid sequence ~~selected from the group consisting of~~ comprising SEQ ID NO:2 ~~and~~ or variants of SEQ ID NO:2 wherein said protein exhibits resistance to a proteinase inhibitor (PI) from Nicotiana alata.

28. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence encodes an amino acid sequence having at least 90% sequence identity to SEQ ID NO:2 after optimal alignment.

29. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence encodes an amino acid sequence set forth in SEQ ID NO:2.

30. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:6.

31. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein said variant includes an N-terminal signal sequence comprising an amino acid sequence SEQ ID NO:3 or an amino acid sequence having at least 90% sequence identity to SEQ ID NO:3 after optimal alignment.

32. (Previously presented) The isolated nucleic acid molecule of Claim 31 wherein the nucleotide sequence comprises SEQ ID NO:5.

33. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein said protein variant comprises an amino acid other than arginine at position 192.

34. (Previously presented) The isolated nucleic acid molecule of Claim 33 wherein the variant comprises a glutamine at position 192.

35. (Previously presented) A vector comprising a nucleic acid molecule of Claim 27.

36. (Previously presented) The vector of Claim 35 wherein the vector is an expression vector.

37. (Previously presented) The vector of Claim 36 wherein the expression vector is operable in a prokaryotic cell.

38. (Previously presented) The vector of Claim 36 wherein the expression vector is operable in a eukaryotic cell.

39. (Previously presented) The vector of Claim 38 wherein the eukaryotic cell is an insect cell.

40. (Previously presented) The vector of Claim 39 wherein the vector is a baculovirus vector.

41. (Previously presented) A genetically modified cell comprising a nucleic acid molecule of Claim 27.

42. (Previously presented) The genetically modified cell of Claim 41 wherein the cell is a prokaryotic cell.

43. (Previously presented) The genetically modified cell of Claim 41 wherein the cell is a eukaryotic cell.

44. (Previously presented) A method for modulating expression of a nucleic acid molecule of Claim 27 in an insect, said method comprising contacting said nucleic acid molecule with an effective amount of an agent for a time and under conditions sufficient to decrease or increase the expression of said nucleic acid molecule.

45. (Previously presented) An isolated protein having an amino acid sequence selected from the group consisting of SEQ ID NO:2 or a variant thereof, wherein said protein exhibits resistance to a PI from N. alata.

46. (Previously presented) The protein of claim 45 wherein said amino acid sequence comprises an amino acid sequence having at least 90% similarity to SEQ ID NO : 2 after optimal alignment.

47. (Previously presented) The protein of Claim 45 encoded by a nucleotide sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:6.

48. (Previously presented) The protein of Claim 45 wherein the variant is an N-terminal signal sequence.

49. (Previously presented) The protein of Claim 48 wherein the signal sequence comprises an amino acid sequence as set forth in SEQ ID NO:3.

50. (Previously presented) The protein of Claim 45 wherein said variant comprises an amino acid other than arginine at position 192.

51. (Previously presented) The isolated chymotrypsin of Claim 50 wherein said variant comprises a glutamine at position 192.

52. (Previously presented) An antagonist of a protein of Claim 45.

53. (Previously presented) The antagonist of Claim 52 wherein the antagonist binds or interacts with the chymotrypsin at or near amino acid residue position 192.

54. (Previously presented) The antagonist of Claim 52 wherein said antagonist is PotI.

55. (Previously presented) A genetically modified plant comprising cells capable of producing an antagonist of a protein of Claim 45.

56. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is a monocotyledonous plant.

57. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is a dicotyledonous plant.

58. (Previously presented) The genetically modified plant of Claim 55 wherein the plant products PotI.

59. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is cotton, sweet corn, tomato, tobacco, pimento, potato, sunflower, citrus, plums, sorghum, leeks, soybean, alfalfa, beans, pigeon peas, chick peas, artichokes, curcurbits, lettuce, Dianthus, geraniums, cape gooseberry, maize, flax and linseed, lupins, broad beans, garden peas, peanuts, canola, snapdragons, cherry, pot marigolds, Helichrysum (an ornamental plant), wheat, barley, oats, triticale, carrots, onions, orchids, roses and petunias.

60. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is a cotton plant.

61. (Previously presented) The genetically modified plant of Claim 55 comprising a nucleic acid molecule encoding PotIA and/or PotIB.

62. (Previously presented) Seeds or other reproduction material from the plant of Claim 55.

63. (Previously presented) A method for modulating activity of a protein of Claim 45 in an insect, said method comprising contacting said protein with an effective amount of an agent for a time and under conditions sufficient to decrease or increase the activity of said protein.

64. (New) A composition comprising;

an antibody that binds to an active or activatable chymotrypsin from *Helicoverpa* spp., or an active or activatable variant or homolog of said chymotrypsin wherein said chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2 or an amino acid sequence having at least about 75% similarity to SEQ ID NO:2 after optimal alignment.

65. (New) The antibody of claim 64, wherein the chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2.

66. (New) The antibody of claim 64 wherein said antibody is a polyclonal antibody.

67. (New) A polynucleotide molecule comprising a sequence that is antisense to a polynucleotide encoding an active or activatable variant or homolog of said chymotrypsin wherein said chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2 or an amino acid sequence having at least about 75% similarity to SEQ ID NO:2 after optimal alignment.

68. (New) The antisense polynucleotide molecule of claim 67, wherein the chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2.